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Filberts

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The Pacific Northwest is the only place in the United States where filberts are grown commercially to any extent. Here the filbert thrives. Only after studying the reports concerning the amount of filberts consumed each year, and then comparing the quality of the nuts usually imported with the ones grown in the Pacific Northwest, can one see the possibility of the filbert industry. The large, fresh nuts of the Pacific Northwest are much superior to imported stock, as the imported stock is nearly always one year old when received, and of inferior quality.

Soils. The filbert has a rather wide adaptation to various kinds of soil. Wherever the soil is deep, fertile, and well drained, successful growing of this nut can be carried on. While the trees need ample moisture, wet, heavy land with poor drainage is very unsatisfactory. The river-bottom lands have given good results, as have the foothills in red hill types of soil. One test adopted by many growers which seems to be correct is, where the wild hazel grows in abundance, there the filbert will do well.

Propagation. Filberts are propagated mainly by layerage, though some few are budded or grafted. Layerage is the most satisfactory and the commercial method of propagating filberts. In layerage the last year's suckers, or wood growth coming from the base of the tree, are staked down to the ground sometime before the buds break. As a rule the shoots are notched or cut next the tree, where they are bent, and scarified or wounded along the lower surface. As the buds break and growth starts out, a light layer of sand or soil may be thrown around the shoots. As the shoots grow higher and taller, the sand or soil is heaped up to a depth of five to eight inches. This will keep the mother shoot moist and encourage root formation, which usually occurs at the base of the new shoot. If every condition is suitable every shoot that grows up will have a clump of roots at its base. This is the generally accepted method of propagating filberts by layerage.

The suckers that grow up each summer will often root the following winter if earth is heaped around them late in the summer or early fall. In the spring they can be transferred to a nursery for one year to develop a larger root system.

Planting and Planting Distances. Care is necessary in transplanting to avoid allowing the root system to dry out. The roots of the young trees are small and fibrous and will dry out readily if exposed to the air. After planting, the tops should be cut back to the height where it is desired the top should be formed. Unless the tops are cut back there will be a large leaf surface to draw water and food supplies from a root surface decreased by digging. As the plant also receives food supplies from the mother shoot as well as its own roots, there will be too large a leaf surface for the size of the root system.

In the past it has been recommended to plant the trees from twelve to fifteen feet apart, but later observations of the commercial varieties lead to the belief that the minimum distance should be twenty by twenty on the poorer soil, while with the more fertile soils the distance should be twenty-two by twenty-two or twenty-five by twenty-five feet. In England many filbert plantings are known to be over one hundred fifty years old, so with the excellent growth obtained here, the greater distance will undoubtedly pay in the end. The filbert is essentially a long-term investment and should not be considered as a nut that will return the highest yields within a few years. Trees will begin bearing at five to six years of age, and by the time they are ten to twelve years old will be in heavy bearing.

Cultivation. Cultivation should be the same as with any other fruits. A plentiful supply of moisture should be available throughout the summer season, and to maintain this, constant cultivation during the summer is necessary. Cultivation with resultant benefits has a tendency to increase the size of the nut. It should begin in the spring with a good plowing and be followed at intervals throughout the season with a harrow or such tool as will fine the soil, and prevent the formation of a crust that will allow evaporation of the moisture.

Pruning. Pruning is a subject approached very carefully by the best informed men. Apparently the best type of tree is one headed from eighteen to thirty inches from the ground, and with five to eight scaffold branches. The early pruning should be such as to shape the tree to the form desired.

When the tree comes into bearing the pruning should be of such a type as will keep new wood constantly coming in each year, and will also keep the top open. By keeping the top open, the sunlight is allowed to reach the center of the tree, thus keeping alive the buds and fruiting wood in the center of the tree and preventing the condition where all of the bearing wood is formed on the outside of the tree with a great potential bearing surface on the inside of the tree barren of fruit buds. As the majority of the buds are borne laterally on one-year-old wood, it will be necessary to prune in such a way as to bring on a certain amount of new growth each year.

As a rule a certain amount of heading back may be necessary, accompanied by thinning out. On fertile soils where vigorous growth is obtained each year, thinning out alone may be enough, while on less fertile soils where new growth is not so readily secured, heading back each year may be resorted to, to bring on the new growth. The general

opinion seems to be that the pruning will in time come to be a modification of the heavy pruning given peach trees. On the other hand, too heavy pruning and the consequent heavy growth give long succulent branches. In the case of the very long growth the majority of the buds will be found grouped near the middle of the twig with the greater part of the surface barren of pistillate flowers or of catkins. The largest number of pistillate or female flowers will be found on vigorous new wood that has numerous short laterals. If the tree can be kept open, fruit will be borne on short twigs that continually come out on the old wood as far down as the crotch of the tree.

Harvesting. As a rule the nuts are picked from the ground. The best commercial varieties shuck themselves to a large extent, but many have to be separated from the husks by hand. After gathering, the nuts can be spread out in a dry place to dry and cure. After drying, the nuts should be kept in a cool, moderately dry place. A very warm dry place will dry out the nuts so that the kernel becomes hard and dry with much of the fine flavor lost. Drying should be enough to keep the nut from molding.

Varieties and Cross-pollination. For commercial planting the Barcelona is the main variety. This is a round nut of good quality that drops freely from the husk. The tree bears heavily and regularly.

For pollinizing the Barcelona variety we have several varieties of proved value. Among these are Nottingham, Daviana, White Aveline, and DuChilly. These have been tried several seasons and in large numbers. The White Aveline sheds pollen first, followed by Nottingham, Daviana, and DuChilly in order. The Nottingham and Daviana gave the highest percent of set in 1922. The Daviana is the lightest bearer of the four, Nottingham and DuChilly probably the heaviest. From present indications the Nottingham is the most desirable where obtainable, but it is very scarce.

One variety which showed up exceptionally well but has had only one season's test is the Geantes de Halle. It is a fair bearer and gave the heaviest set of any variety used.

It will be necessary for some time to come to use the varieties available, as it will take some time to propagate the more desirable ones in large enough numbers. It would seem desirable, too, to use more than one variety of pollinizer if these varieties have different blooming periods. This might avoid consequences of very bad weather if only one variety was used and the bad weather should come at the blooming time of this variety.

In normal seasons one pollinizer in nine seems to be sufficient, but in unusual seasons it may be found that more are advisable. Sixteen to twenty percent of pollinizers is not too many. Since the aim is to get a big crop on the Barcelona, a few more trees of pollinizers may bring this about, increasing the Barcelona crop instead of decreasing it when the number of Barcelona trees are decreased.

Owing to the confusion in the nomenclature of the filbert, the prospective grower would perhaps be safest in buying from some grower who has a plantation of proved bearing and use the varieties recommended by that grower. Where a plantation is bearing, the buyer will be safe in getting the combination of varieties on that plantation. In buying one variety from one place and another variety from another, one can not be sure that he is getting a combination of varieties that will give good pollination. There are several orchards at the present time that are not bearing well, apparently due to this fact.